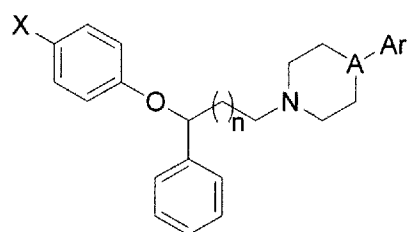


IN THE CLAIMS:

1. (Withdrawn) A serotonin reuptake inhibitor comprising:
a first part, wherein the first part comprises a moiety with antidepressant properties and having an affinity for the serotonin reuptake transporter (SERT); and
a second part, wherein the second part comprises a moiety having an affinity to serotonin (5-HT) receptors, and wherein the second part is coupled to the first part.
2. (Withdrawn) The serotonin reuptake inhibitor of claim 1, wherein the 5-HT is 5-HT_{1A}, 5-HT_{2B}, 5-HT_{2C}, or 5-HT₃.
3. (Withdrawn) The serotonin reuptake inhibitor of claim 1, wherein the 5-HT is 5-HT_{2A}.
4. (Currently Amended) A serotonin reuptake inhibitor having the general formula:



~~wherein X is F or CF₃;~~

~~n is 0 or 1;~~

~~A is N or C; and~~

~~Ar is an aryl moiety; and salt thereof.~~

wherein when X = F; n = 0; and A = N:

Ar is an aryl moiety, or salt thereof, excluding 3-chlorophenyl, 2-methoxyphenyl, and 3-trifluoromethylphenyl;

wherein when X = F; n = 0; and A = C:

Ar is an aryl moiety, or salt thereof;

wherein when X = F; n = 1; and A = N or C:

Ar is an aryl moiety, or salt thereof;

wherein when $X = CF_3$; $n = 0$; and $A = N$ or C ;

Ar is an aryl moiety, or salt thereof;

wherein when $X = CF_3$; $n = 1$; and $A = N$;

Ar is a substituted aryl moiety, or salt thereof, excluding
benzo[d]isothiazole, 2-methoxyphenyl, 4-fluorophenyl, 4-methoxyphenyl,
2-pyrimidyl, 2-chlorophenyl, 4-chlorophenyl, 2-pyridyl, and 4-
nitrophenyl; and

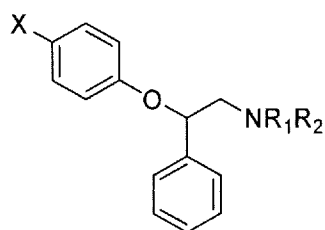
wherein $X = CF_3$; $n = 1$; and $A = C$;

Ar is an aryl moiety, or salt thereof.

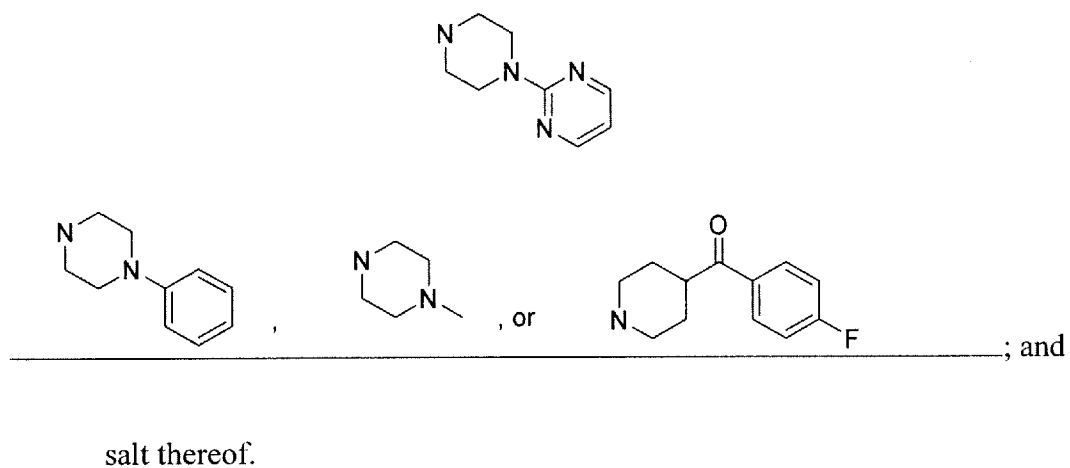
5. (Withdrawn) A serotonin reuptake inhibitor comprising a bi-functional organic molecule combining serotonin (5-HT) receptor antagonism and serotonin reuptake inhibition into one molecular entity.
6. (Withdrawn) The serotonin reuptake inhibitor of claim 5, wherein the 5-HT is 5-HT_{1A}, 5-HT_{2B}, 5-HT_{2C}, or 5-HT₃.
7. (Withdrawn) The serotonin reuptake inhibitor of claim 5, wherein the 5-HT is 5-HT_{2A}.
8. (Withdrawn) A serotonin reuptake inhibitor comprising a structural homologue of an antidepressant serotonin-selective reuptake inhibitor (SSRI) capable of inhibiting serotonin reuptake transporter (SERT) coupled to a piperazine or piperidine moiety being antagonistic to a serotonin (5-HT) receptor.
9. (Withdrawn) The serotonin reuptake inhibitor of claim 8, wherein the 5-HT is 5-HT_{1A}, 5-HT_{2B}, 5-HT_{2C}, or 5-HT₃.

- Xc1ccc(O[C@H](c2ccccc2)CCN3CCN(C4=CC=CC=C4)CC3)cc1

12. (Currently Amended) A serotonin reuptake inhibitor having the general formula:

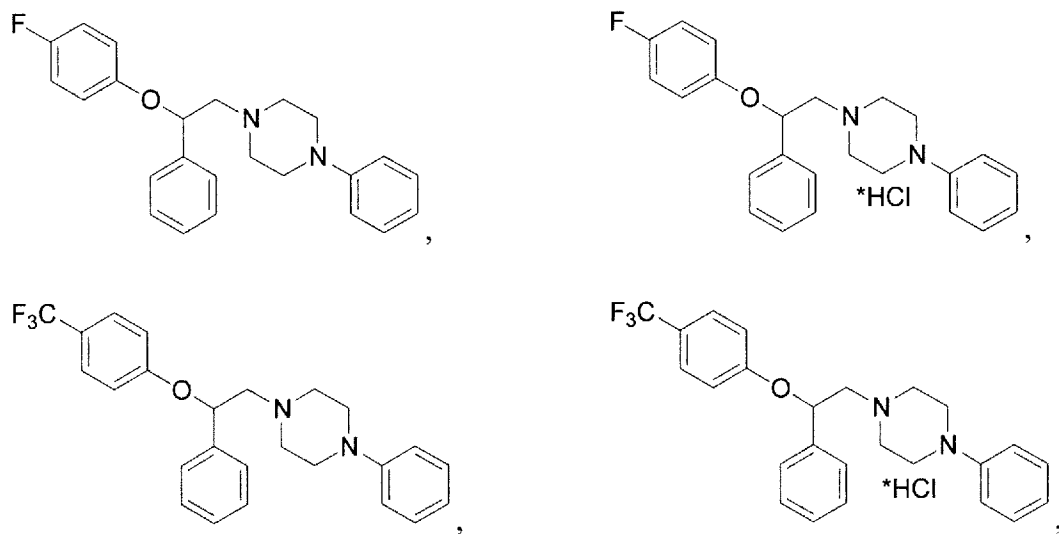
~~Chemical structures of various piperazine derivatives, including:

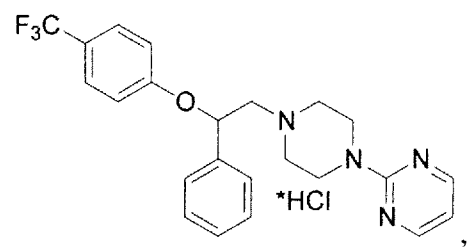
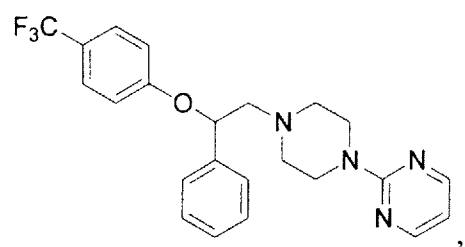
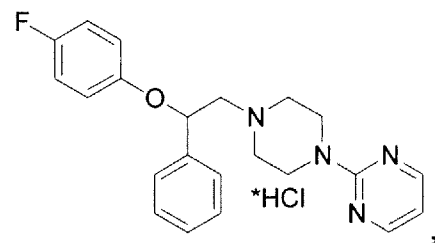
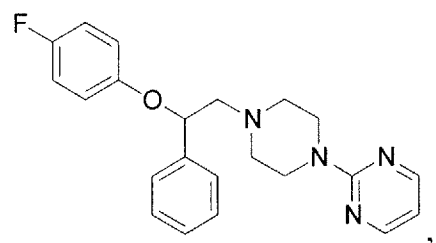
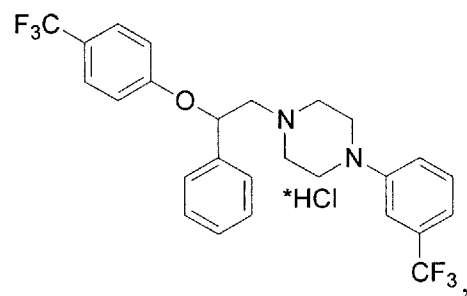
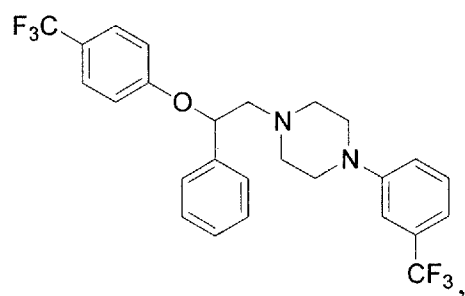
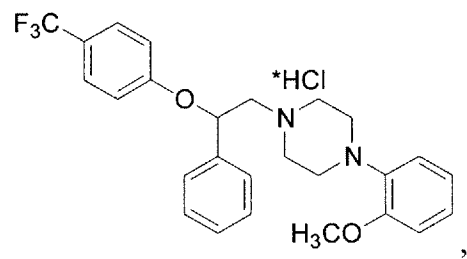
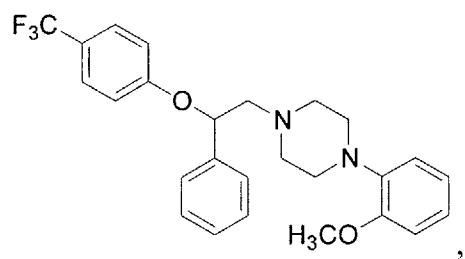
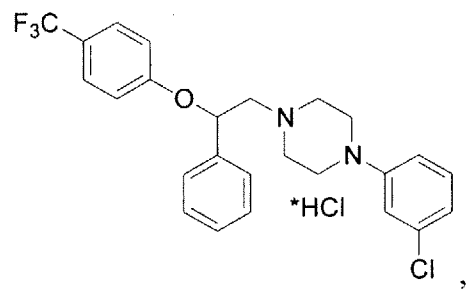
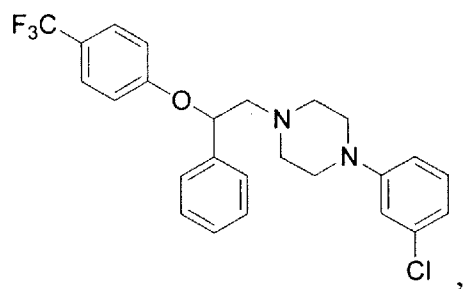
- 4-chloro-N-(piperazin-2-yl)benzamide
- 4-methoxy-N-(piperazin-2-yl)benzamide
- 4-(trifluoromethyl)-N-(piperazin-2-yl)benzamide
- 4-(pyridin-2-yl)-N-(piperazin-2-yl)benzamide
- N-(piperazin-2-yl)benzamide
- N-methylpiperazine
- N-(4-fluorobenzoyl)piperazine~~

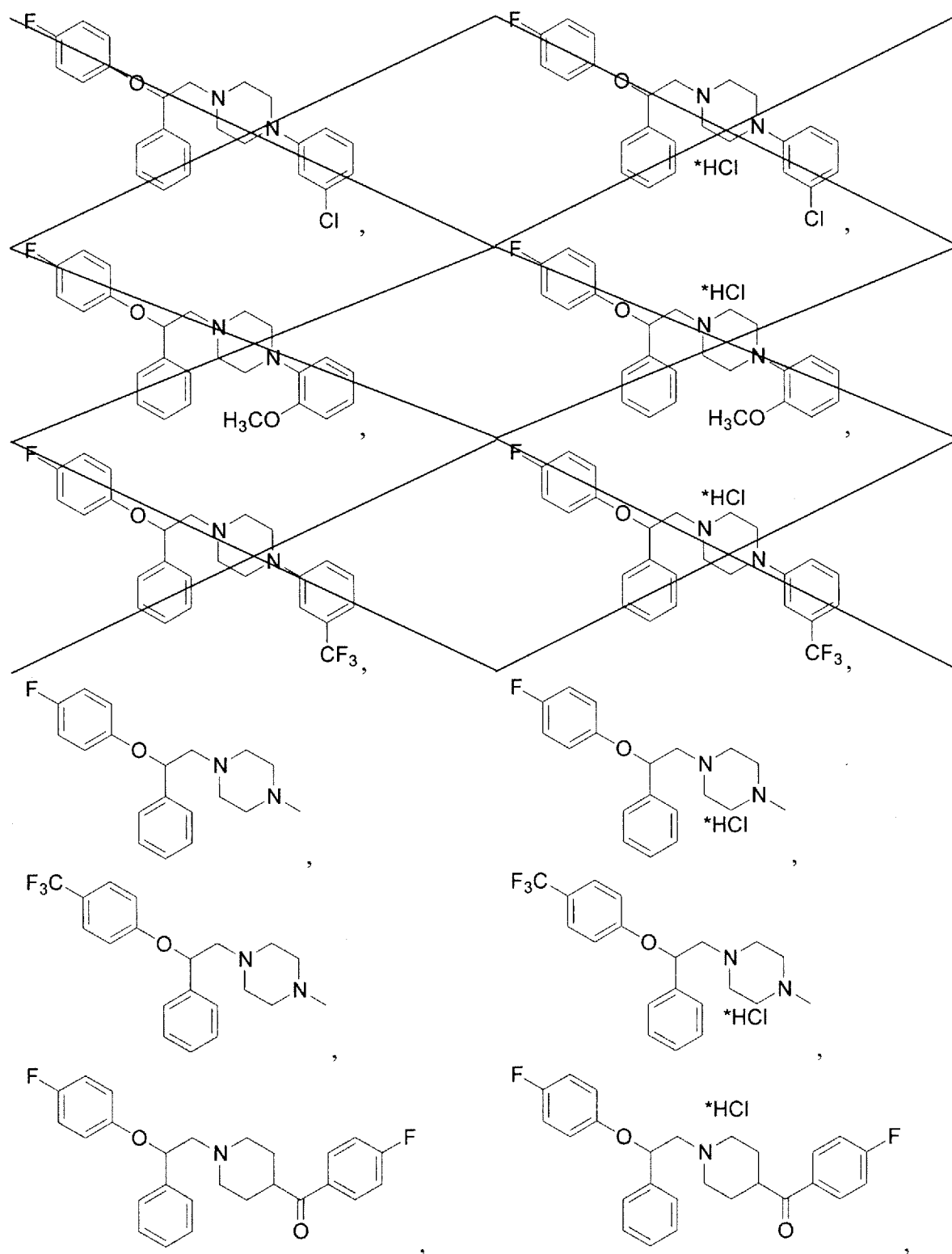


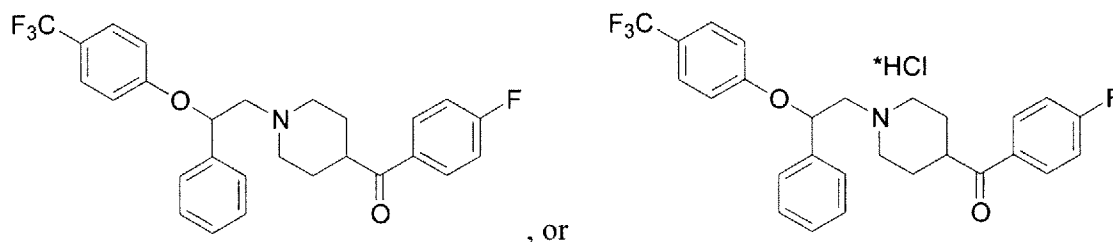
13. (Cancelled)

14. (Currently Amended) A serotonin reuptake inhibitor having the formula:









15. (Withdrawn) A method for treating depression in a patient, comprising:
administering the serotonin reuptake inhibitor of claim 1.
16. (Withdrawn) A method for treating depression in a patient, comprising:
administering the serotonin reuptake inhibitor of claim 4.
17. (Withdrawn) A method for treating depression in a patient, comprising:
administering the serotonin reuptake inhibitor of claim 5.
18. (Withdrawn) A method for treating depression in a patient, comprising:
administering the serotonin reuptake inhibitor of claim 8.
19. (Withdrawn) A method for treating depression in a patient, comprising:
administering the serotonin reuptake inhibitor of claim 12.
20. (Withdrawn) A pharmaceutical formulation for the treatment of depression in a patient,
comprising:
a pharmaceutically effective amount of the serotonin reuptake inhibitor of claim 1.
21. (Original) A pharmaceutical formulation for the treatment of depression in a patient,
comprising:
a pharmaceutically effective amount of the serotonin reuptake inhibitor of claim 4.
22. (Withdrawn) A pharmaceutical formulation for the treatment of depression in a patient,
comprising:

a pharmaceutically effective amount of the serotonin reuptake inhibitor of claim 5.

23. (Withdrawn) A pharmaceutical formulation for the treatment of depression in a patient, comprising:

a pharmaceutically effective amount of the serotonin reuptake inhibitor of claim 8.

24. (Original) A pharmaceutical formulation for the treatment of depression in a patient, comprising:

a pharmaceutically effective amount of the serotonin reuptake inhibitor of claim 12.